

# NOTES: UNLESS OTHERWISE SPECIFIED

1. POLISH SURFACES -C- & -D- TO 10/5 SCRATCH/DIG.
2. THE CLEAR APERTURE ON SURFACES -C- & -D- IS TO BE CENTRAL Ø01.2mm.
3. CLEAR APERTURE IS TO BE FLAT TO  $\lambda/10$  @632nm.
4. POLISH SURFACES -A- & -B- TO 10/5.
5. SURFACE -A- FIRST COATED  $0.2\mu\text{m}$   $\text{SiO}_2$  TO MAINTAIN TIR FOR "P" POLARIZED 1064nm INTERNAL BOUNCE. THEN HR COATED AT  $0.00\text{mm}$   $0^\circ$  INCIDENCE
6. SURFACE -B- TO BE PARALLEL TO SURFACE -A- TO WITHIN 15 ARC SEC (10"). AR COAT AT  $0.00\text{mm}$  MAINTAINING TIR FOR "P" POLARIZED 1064nm INTERNAL BOUNCE.
7. ACHIEVE FLATNESS OF  $\lambda/10$  PER ANY 1cm LENGTH @632nm OVER SURFACE INDICATED.
8. INDICATED LENGTH IS DETERMINED BY THE FOLLOWING EQUATION:  

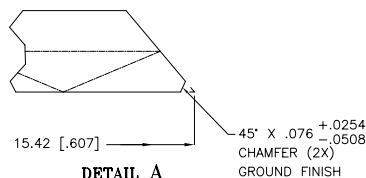
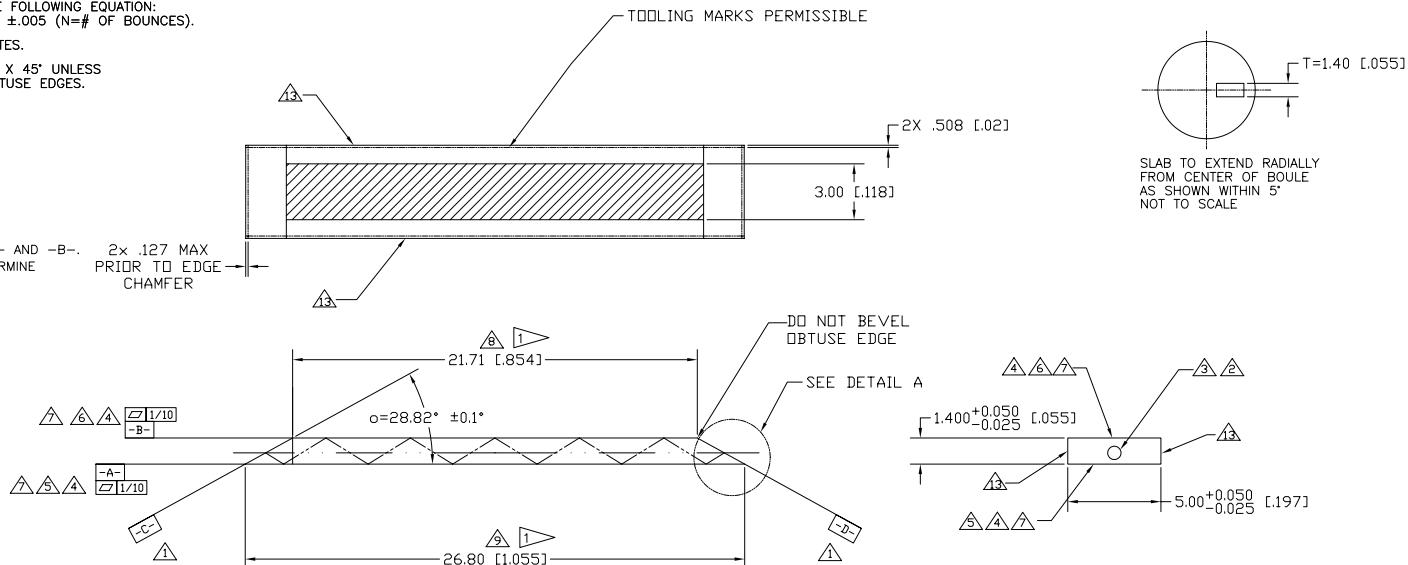
$$= Nt \tan(\sin^{-1}(\cos(a)/n) + a) - t/\tan(a) \pm 0.05$$

$$(N = \# \text{ OF BOUNCES})$$
9. INDICATED LENGTH IS DETERMINED BY THE FOLLOWING EQUATION:  

$$= Nt \tan(\sin^{-1}(\cos(a)/n) + a) + t/\tan(a) \pm 0.05$$

$$(N = \# \text{ OF BOUNCES})$$
10. MAXIMUM PYRAMIDAL ERROR 5 ARC MINUTES.
11. CHAMFER ALL EDGES .003"  $\pm .000/-0.002$  X 45° UNLESS OTHERWISE NOTED. DO NOT INCLUDE OBTUSE EDGES.
12. CHAMFERS NOT TO BE POLISHED.
13. SLAB SIDES: GROUND FINISH
14. ALL OPTICAL SURFACE ROUGHNESS TO BE LESS THAN 20 ANGSTROM RMS.
15. [ ] DIMENSIONS ARE IN INCHES

MEASURE BREWSTER FACE ANGLE AND THICKNESS ON FINAL POLISHED FACES -A- AND -B-. USE THE MEASURED PARAMETERS TO DETERMINE SLAB LENGTH ACCORDING TO EQUATION IN NOTE 8 AND 9



THIS DRAWING WAS PRODUCED USING  
 SOFTWARE: AutoCAD VERSION: 2004  
 FILE NAME: 2004002.DWG

ITEM		SLAB, OPTOLASE GRADE		Nd:YAG		1% Nd	
NO.	REVISION	PART NO.	DESCRIPTION	MATERIAL	MATERIAL SPEC.		
LIST OF MATERIAL							
UNLESS OTHERWISE SPECIFIED-DIMENSIONS ARE IN INCHES			NATIONAL AERONAUTICS AND SPACE ADMINISTRATION		Goddard Space Flight Center		GREENBELT, MARYLAND
TOLERANCES:			DRAWING		INTERPRETED PER ASQC-X673-64-1		
XX .XXX FRACTIONS 63			DESIGNER		TITLE		
±.01 ±.005 ±.1" 1/16			DRAWN		SLAB,		
REMOVE ALL BURRS AND SHARP EDGES R .010 OR CHAMFER MAX.			CHECKED		OSCILLATOR		
<input type="checkbox"/> FLIGHT HARDWARE/POST FAB HARDNESS TEST REQ'D			ON FIELD OF DRAWING THIS ○		11 BOUNCE		
<input type="checkbox"/> HARDNESS TEST NOT REQUIRED			APPROVED				
<input type="checkbox"/> TEST HARDNESS FOR ASTM E-18, LOCATION OPTIONAL			APPROVED-STRESS				
<input type="checkbox"/> TEST HARDNESS PER ASTM E-18 WHERE INDICATED			APPROVED-ENGINEER				
<input type="checkbox"/> NO NON-DESTRUCTIVE EXAMINATION (NDE) REQ'D			GD		2004002		
<input type="checkbox"/> NDE REQUIRED PER 5-313-909 CODE			005654		SCALE 10/1 WT SH 1 OF 1		
GCD204002			L1007				

SLAB,  
 OSCILLATOR  
 11 BOUNCE

GD2004002